(10) (4) (3)

NOS. 91-543; 91-558; 91-563

IN THE
SUPREME COURT
OF THE
UNITED STATES

OCTOBER TERM, 1991

THE STATE OF NEW YORK, THE COUNTY OF ALLEGHENY and THE COUNTY OF CORTLAND, NEW YORK

Petitioners,

v.

THE UNITED STATES OF AMERICA; JAMES D. WATKINS, as Secretary of Energy;
KENNETH M. CARR, as Chairman of the United States Nuclear Regulatory Commission;
THE UNITED STATES NUCLEAR REGULATORY COMMISSION;
SAMUEL K. SKINNER, as Secretary of Transportation; and
WILLIAM P. BARR, as United States Attorney General,

Respondents.

THE STATE OF WASHINGTON; THE STATE OF NEVADA; and THE STATE OF SOUTH CAROLINA,

Intervenors-Respondents.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE SECOND CIRCUIT

RESPONDENTS' STATES OF WASHINGTON, NEVADA AND SOUTH CAROLINA BRIEF IN OPPOSITION

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QUESTION PRESENTED

Did congressional enactment of the Low-Level Radioactive Waste Policy Act of 1980, and its 1985 Amendments, which ratify and implement the unanimous agreement of all the states of the Union to fairly allocate the responsibility for the nation's low-level radioactive waste disposal capacity among themselves, violate the Tenth Amendment or the Guarantee Clause, Article IV, § 4, of the United States Constitution?

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WHAT THIS CASE IS REALLY ABOUT

The states of Washington, Nevada, and South Carolina (sited states) have been the hosts of the only operating low-level radioactive waste disposal sites since 1978. The disposal sites are located at Hanford in the state of Washington, Beatty in the state of Nevada, and Barnwell in the state of South Carolina.

In 1979, the state of Nevada twice temporarily closed the Beatty site due to the improper handling within the state of several low-level radioactive waste shipments being sent to the site.[1] In October 1979, similar transportation and packaging problems caused the governor of Washington to temporarily close the Hanford site.[2] The closures of the Nevada and Washington disposal sites caused the share of low-level waste being accepted in South Carolina to rise to 80 percent of the entire nation's low-level waste. Because of this result, the governor of South Carolina ordered the Barnwell site to only accept one-half the annual amount of waste that it was then receiving. The inadequacy of existing disposal capacity for low-level radioactive waste was at this time a major concern of both the sited and unsited states. A national disposal system with only three sites for waste from all 50 states was vulnerable to widespread health and safety crises.[3]

The sited states were particularly unhappy with the equities of the existing situation. The sited states believed it was unfair that they be required to provide disposal facilities for all 47 of the "unsited" states. In addition to the limitation imposed by the South Carolina governor in 1979, the voters in the state of Washington approved an initiative in 1980 that banned the disposal of out-of-state low-level radioactive waste at Hanford.[4]

In the wake of this crisis, Congress began to consider federal solutions to the problem. However, the states asked that Congressional action be deferred in order to allow the

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[1]H.R. Rep. No. 314, 99th Cong., 1st Sess., pt. 2 at 17, *reprinted in* 1985 U.S. Code Cong. & Ad. News at 3006.

[2]*Id.*

[3]*Id.*

[4]The initiative was declared unconstitutional *See Washington State Building and Construction Trades Council v. Spellman*, 684 F.2d 627 (9th Cir. 1982).

states to develop a low-level radioactive waste policy. Congress agreed. Given this opportunity by Congress, the states acted quickly. The National Governors Association (NGA) created a task force to review and formulate state policy regarding low-level radioactive waste.[5] Another state-created organization called the State Planning Council on Radioactive Waste Management, recommended to President Carter that the national policy on low-level radioactive waste should be that every state is responsible for the disposal of low-level radioactive waste generated within its boundaries, and that states may enter into interstate compacts to carry out the responsibility. The National Conference of State Legislatures and the National Governors Association also adopted this recommendation. The NGA Task Force concluded that the siting of low-level radioactive waste facilities involved primarily state and local issues and should be resolved at those governmental levels.[6]

Thus the states recommended solving the problem of low-level radioactive waste disposal capacity on a regional basis, whereby several states would enter into an interstate compact to establish a new disposal facility for waste generated within the Compact region. In accordance with the states' recommendations, Congress enacted the Low-Level Radioactive Waste Policy Act of 1980, which was codified at 42 U.S.C. §§ 2021b-2021d (1980 Act).[7]

The 1980 Act gave the regional Compacts the authority to restrict, after January 1, 1986, use of the regional disposal facility to waste generated within the region. In effect the unsited states were given a deadline of January 1, 1986 to establish their own regional disposal facilities.[8]

As the deadline approached, the states began to realize that finding sites within the unsited regions probably could

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[5]1985 U.S. Code Cong. & Ad. News at 3007.

[6]*Id.*

[7]*Id.*

[8]*Id.*

not be accomplished by January 1, 1986, although significant progress was achieved in developing regional disposal Compacts. Thirty-nine states had entered into compacts by the summer of 1985, but progress on achieving Congressional ratification of the compacts was slowed by the fact that only the Northwest,[9] Southeast,[10] and Rocky Mountain Compact[11] states would have had disposal capacity available as of January 1, 1986; the other non-sited states would not have had any place to send their waste for disposal after that date. The process envisioned in the 1980 Act was grinding to a halt, creating a crisis similar to that which had existed in 1979.[12]

The sited states threatened that they would close their facilities to all waste if Congress did not pass acceptable legislation by January 1, 1986. The states again under the auspices of the National Governors Association developed a compromise under which the states of Washington, South Carolina, and Nevada agreed to continue to accept all of the nation's low-level radioactive waste for an additional seven years in exchange for incentives and penalties that would better guarantee that new sites would be developed.[13] The state-generated and state-approved National Governors Association proposal served as the foundation for Congressional action.

The legislation required that the unsited states meet specified milestones during the interim access period from 1986-1992, in order for the waste generators within their borders to receive continued access to disposal facilities. The sited states would be permitted, on an annual basis, to

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[9]The Northwest Interstate Compact includes Washington, Oregon, Idaho, Montana, Utah, Alaska, and Hawaii.

[10]The Southeast Compact includes South Carolina, North Carolina, Virginia, Tennesee, Mississippi, Alabama, Georgia, and Florida.

[11]The Rocky Mountain compact includes Nevada, Wyoming, Colorado, and New Mexico.

[12]*Id.*

[13]*Id.* at 3008.

cap the amount of waste disposed of at their facilities and they would also be permitted to impose fixed surcharges on any waste accepted for disposal from outside the region.[14]

The sited and unsited states strongly urged Congress to adopt these basic elements of the compromise. Widespread state support allowed these elements to remain in the bills which passed each house and in the final legislation. On December 19, 1985, the low-level radioactive waste disposal crisis was averted when the compromise legislation passed unanimously as the Low-Level Radioactive Waste Policy Amendments Act of of 1985 (1985 Amendments Act) and seven compacts were ratified under the Omnibus Low-Level Radioactive Waste Interstate Compact Consent Act.[15]

Under the 1985 Amendments Act, significant progress has been made by several states and Compacts in developing new low-level radioactive waste disposal capacity. The states of California, Arizona, North Dakota, and South Dakota have formed the Southwest Compact, with California as the host state. Illinois is the host state of the Central-Midwest Compact, made up of Illinois and Kentucky. Nebraska is the host state of the Central Compact, which includes Nebraska, Kansas, Oklahoma, Arkansas, and Louisiana. The Appalachian Compact with Maryland, Delaware, West Virginia, and Pennsylvania is siting a disposal facility in Pennsylvania. Ohio is the host state of the Midwest Compact, which includes Ohio, Indiana, Missouri, Iowa, Minnesota, and Wisconsin. Texas is a "go-it-alone" state, developing its own disposal site without a regional compact. Each of these Compacts and states have made significant progress toward development of operational low-level radioactive waste disposal facilities in compliance with the 1985 Amendments Act. California, Nebraska, and Illinois have submitted license applications for their disposal facilities to the Nuclear Regulatory Commission.

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[14] *Id.* at 3008-3009.

[15] 131 Cong. Rec. H38115-38120; S38403-38425.

California expects its new disposal facility to be operating before the end of 1991.

In addition, pursuant to the contracting provision of the 1985 Amendments Act, the Northwest Compact and the Rocky Mountain Compact have negotiated a proposed agreement whereby the states of Nevada, Wyoming, New Mexico, and Colorado will have access to the disposal site located in Washington after December 31, 1992. This agreement furthers the 1985 Amendments Act policy to regionalize disposal capacity.

The probability that the 1985 Amendments Act process will result in the orderly development of new low-level radioactive waste disposal capacity throughout the nation has been central to the sited states' decision to provide continued access to the disposal sites for the disposal of low-level radioactive waste generated outside the sited states, pursuant to the 1985 Amendments Act.

REASONS WHY THE PETITION SHOULD BE DENIED

I. PETITIONERS MISCHARACTERIZE THE ISSUE IN THIS CASE

In their petitions, the state of New York and the two counties characterize the issue as if Congress directed the states to be responsible for the disposal of low-level radioactive waste. The Petitioners try to create the impression that such responsibility was foisted upon unwilling states by the federal government, or that the states were commandeered by Congress to assume this responsibility. This characterization is inaccurate. *See supra*, pp.1-5. Both the 1980 Act and its 1985 Amendments are more properly characterized as a voluntary agreement among the states to be responsible for the disposal of low-level radioactive waste on a re-

gional and equitable basis.[16] The Court of Appeals' opinion neatly and properly characterizes these laws as:

> paragons of legislative success, promoting state and federal comity in a fashion rarely seen in national politics.

State of New York v. United States, 942 F.2d 114, 119 (2nd Cir. 1991).

The states are entitled to enter into agreements among themselves which can then be ratified by Congress in order to be enforced in the state and federal system. The states unanimously agreed to assume the responsibilities and liabilities the state of New York now claims were foisted upon it by Congress.

II. THE CIRCUIT COURTS OF APPEAL HAVE CONSISTENTLY AND PROPERLY APPLIED GARCIA AND BAKER

In their petitions, the state of New York and the two counties ask this Court to review the constitutionality of the Low-Level Radioactive Waste Policy Amendments Act of 1985. The petitioners' theory is that the 1985 Amendments Act interferes with New York's sovereign powers and thus violates principles of federalism under the Tenth Amendment of the United States Constitution.[17]

The Second Circuit properly deferred, under the Tenth Amendment, to the agreement of all the states, including New York, which supported the national political process in creating the Low-Level Radioactive Waste Policy Amendments Act of 1985. The Petitioners fail to show that the Sec-

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[16]The legislative history of the 1985 Amendments Act and 1980 Act distinguishes this case from *Maryland v. EPA*, 530 F.2d 215 (4th Cir. 1979), *vacated and remanded for consideration of mootness sub nom. EPA v. Brown*, 431 U.S. 99 (1977).

[17]Although the Petitioners claim that the Guarantee Clause, Art. IV, § 4, of the United States Constitution is also violated, this Court has consistently held that challenges to legislation based on the Guarantee Clause are not justiciable. *City of Rome v. United States*, 446 U.S. 156, 182 n. 17 (1980); *Baker v. Carr*, 369 U.S. 186, 228-29 (1962).

ond Circuit is out of step with the Tenth Amendment analysis of its sister circuits or this Court.

The Tenth Amendment limits on Congress' authority to regulate the states were set out by this Court in *Garcia v. San Antonio Metropolitan Transit Authority*, 469 U.S. 528 (1985). "*Garcia* holds that the [Tenth Amendment limits on Congress' authority to regulate state activities] are structural, not substantive, *i.e.*, that states must find their protection from Congressional regulation through the national political process, not through judicially defined spheres of unregulable state activity." *South Carolina v. Baker*, 485 U.S. 505 (1988).

This Court in *South Carolina v. Baker* went on to state that

> although *Garcia* left open the possibility that some extraordinary defects in the national political process might render Congressional regulation of activities invalid under the Tenth Amendment,* * * nothing in *Garcia* or the Tenth Amendment authorizes courts to second guess the substantive basis for legislation. Where * * * the national political process did not operate in a defective manner, the Tenth Amendment is not implicated.

Id. at 512-513. The court observed that

> South Carolina has not even alleged that it was deprived of any right to participate in the national political process or that it was singled out in a way that left it politically isolated and powerless.

Id.

The United States Court of Appeals for the Ninth Circuit recently construed the Tenth Amendment consistent with both *Garcia* and *Baker* in a case dealing with the siting of a disposal site for high-level nuclear waste in *Nevada v. Watkins*, 914 F.2d 1545 (9th Cir. 1990), *cert. denied*, ___ U.S. ___, 111 S.Ct. 1105 (1991). In that case, Nevada argued that

> because Nevada was not represented on the House and Senate Conference Committee on the Omnibus Budget

> Reconciliation Act of 1987 when the 1987 [Nuclear Waste Policy Act] amendments were approved, it was deprived of its 'right to participate in the national political process' and 'was singled out in a way that left it politically isolated and powerless.'

Id. at 1556 (quoting Petitioners' Opening Brief at 40, quoting *South Carolina v. Baker*, 485 U.S. at 512).

The Ninth Circuit Court of Appeals rejected Nevada's arguments and focused on the national political process in the factual setting presented:

> Nevada cannot point to any defect in the political process that led to the enactment of the 1987 NWPA Amendments. As the Secretary points out, the Tenth Amendment does not protect a state from being outvoted in Congress. * * * Nor can Nevada complain that its lack of representation on the Conference Committee created a defect in the political process. To the extent that Nevada asserts that lack of representation created a defect in the political process as contemplated by *South Carolina v. Baker*, it cannot succeed in light of the plenary consideration given to the Omnibus Budget Reconciliation Act of 1987.

Id. at 1556-1557.

Based on the foregoing, it is clear that *Garcia* properly limits courts to an examination of the national political process "in the factual setting" presented, in order to determine whether Congress has transgressed the Tenth Amendment in the exercise of its Commerce Clause powers. *See Garcia*, 469 U.S. at 556. That is, *Garcia* permits a procedural examination of the national political process and not a substantive review of Congressional actions under a *Garcia* exception.

In this case, rather than being denied the opportunity to participate in the national political process, the state of New York actively sought the legislative consensus that became the 1985 Amendments Act. The specific views of the state of New York were aired during Congressional hearings on the Act. In particular on March 7, 1985, Mr. Charles R. Quinn, Deputy Commissioner for Policy and Planning of the New York State Energy Office, testified

> New York State supports the efforts * * * to resolve the current impasse over Congressional consent to the proposed low-level radioactive waste compacts * * * New York State has been participating with the National Governors Association * * * in an effort to * * * reach a consensus between all groups.[18]

According to Mr. Quinn's testimony, one of the "major points which [New York] believes must be incorporated within any Congressional Act on this matter" was "appropriate penalties * * * for failure to meet designated milestones."[19]

The take-title penalty provision was devised by the Senate Environment and Public Works Committee and accepted by the NGA Task Force and the states[20]. New York State was not isolated when Congress added that provision to the 1985 Amendments Act. Senator Moynihan of New York was a member of that committee. Just before passage of the 1985 Amendments Act, Senator Moynihan strongly supported the bill

> Mr. President, the low-level nuclear waste bill before us is a well-balanced compromise, and a most necessary one. Without clear action by the Congress, the governors of the three states that have been disposing of all of our commercial low-level nuclear waste have threatened to shut down the disposal sites in their states. I cannot say that I blame them. * * *
>
> I am pleased to report that this complex bill meets those conflicting needs very well.* * *
>
> The timetables required by this measure are firm and realistic. It is indeed an equitable approach for all concerned, and I am pleased to support it.[21]

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[18]Amendments to the Federal Low-Level Radioactive Waste Policy Act of 1985: Hearings on HR 1083 before the Subcommittee on Energy and the Environment of the House Committee on Interior and Insular Affairs, 99th Cong., 1st Sess. 197 (1985).

[19]*Id.* at 197-198

[20]Although the Appellants challenge the Amendments Act as a whole, they focus especially on the "take title provision," 42 U.S.C. § 2021e(d)(2)(C) which requires states to take title to the waste if they have not made arrangements for a disposal site by January 1, 1996. *See 131 Cong. Rec. S38405.*

[21]131 Cong. Rec. S38423.

No member of the New York State Congressional Delegation opposed the take-title provision, and the bills containing the penalty were unanimously passed by both the Senate and the House by voice vote.

The Petitioners' constitutional challenge to the 1985 Amendments Act is an attempt to continue to reap the benefits of the compromise agreement by the sited states to continue to accept out-of-region wastes until 1993, without New York accepting the burdens of developing waste disposal capacity to which it had agreed in 1985. The state of New York licenses the use of radioactive materials for various beneficial uses as an agreement state under the Atomic Energy Act. New York obtains the benefits of the use of these nuclear materials, and pursuant to the 1985 Amendments Act continues to shift the burden of disposal onto the sited states. New York would disrupt the compromise agreed to by the states in 1985 to share that burden and which was incorporated into the 1985 Amendments Act. If the 1985 consensus is to be revisited, the proper forum for such a process is among the states' elected representatives in Congress and not the federal courts.

> Negotiation and agreement with congressional, rather than judicial, supervision has long been the preferred method, provided by the Constitution, for resolution of interstate and sovereign disputes. When reviewing the complex provisions of the [1985 Amendments Act], courts should take particular note of this traditional preference.[22]

The 1985 Amendments Act is a fair and reasonable compromise developed among the states and enacted through the national political process. The Petitioners fail to show that they were denied an opportunity to participate in the national political process that brought about the leg-

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[22]Berkovitz, *Waste Wars: Did Congress Nuke State Sovereignty in the Low-Level Radioactive Waste Policy Amendments Act of 1985?*, 11 Harvard Env. L. Rev. 437, 475-476 (1987).

islation at issue. The Petitioners also fail to show that the Courts of Appeal have inconsistently applied the *Garcia* and *Baker* tests.[23]

The 1980 Act and its 1985 Amendments Act is an example of federalism operating at its highest and best level. The Tenth Amendment does not prohibit states from agreeing among themselves to solve a national waste disposal problem. The 50 sovereign United States participated in the national political process to forge a consensus to solve a serious problem that affects all the states—the safe disposal of low-level radioactive waste.

CONCLUSION

For the reasons given above, the Petition for a Writ of Certiorari should be denied.

DATED this 5th day of December 1991.

Respectfully submitted,

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[23]Even if this Court were inclined to revisit *Garcia* and *Baker*, in light of the legislative history of the 1980 Act and its 1985 Amendments this case does not present a promising vehicle to do so.

United States Exhibit B—(included in the Compilation of Declaration and Exhibits filed on October 26, 1990)—Declaration of Richard L. Bangart (dated 10/25/90).

I, Richard L. Bangart, hereby declare that:

1. I am the Director of the Division of Low-Level Waste Management and Decommissioning, U.S. Nuclear Regulatory Commission. My Division has responsibility for the performance of safety and environmental reviews of applications for licenses for low-level radioactive waste (LLW) disposal facilities. I have held previous positions within NRC as Director of the Division of Radiation Safety and Safeguards in Region IV and Section leader in the Office of Nuclear Reactor Regulation where I had inspection and licensing responsibility for assuring safe management and disposal of radioactive wastes by NRC licensees.

2. The NRC is an independent regulatory agency of the Federal Government created under the Energy Reorganization Act of 1974. NRC has responsibility to assure that civilian uses of nuclear materials are carried out with proper regard and provision for the protection of public health and safety, of the environment, and of the national security. The NRC has no developmental or promotional responsibilities for civilian uses of nuclear materials.

3. The NRC carries out its mission through the licensing and regulatory oversight of nuclear reactor operations and other activities involving possession and use of nuclear materials, through the issuance of rules and standards, and through inspection and enforcement actions.

4. NRC's licensing procedures and regulations are set out in Title 10, Code of Federal Regulations (CFR). NRC's regula-

tions for licensing the disposal of LLW in are set out in 10 CFR Part 61. Agreement States adopt and implement regulations which are compatible to Part 61. Other non-Agreement States are subject to Part 61. Thus, all LLW disposal facilities must meet Part 61 or compatible Agreement State regulations. The purpose of Part 61 and compatible Agreement State regulations is to ensure that LLW disposal facilities licensed under the regulations will protect the public health and safety and the environment.

5. Part 61 was developed over an approximate five year period and included extensive public, State and industry input and preparation of supporting draft and final environmental impact statements. It was published as a final rule on December 27, 1982.

6. Problems in siting, operations and financial assurance were experienced at four of the six early commercial LLW disposal facilities including West Valley (licensed by New York State), Maxey Flats (licensed by Kentucky), Sheffield (licensed by Atomic Energy Commission (AEC)), and Beatty (licensed by Nevada and AEC). The requirements included in Part 61 are based on both the positive, successful operating experience as well as the lessons learned from poor operating performance of past LLW disposal sites and operations. Part 61 is directed at ensuring that past problems in LLW disposal facility siting, operations and financial assurance will not recur in the future.

7. Part 61 establishes requirements in four major areas. First, it establishes the administrative and procedural requirements which NRC will apply in licensing LLW disposal facilities. Second, it establishes overall performance or safety objectives which must be achieved in the land disposal of LLW. Third, it establishes specific technical requirements for near surface disposal in the areas of siting, disposal facility

design, facility operations, facility closure, environmental monitoring, waste form, waste classification, financial assurance, land ownership and institutional control. Fourth, it establishes requirements which licensees who generate waste must meet when shipping such waste to a disposal facility.

8. The technical requirements of Part 61 apply to the near surface disposal of LLW. Shallow land burial is one near surface disposal technique. Some States have precluded use of shallow land burial through legislation. A State may preclude use of a particular technique, such as shallow land burial, for its own reasons and use another alternative near surface disposal technique such as a below ground vault.

9. In response to the Low-Level Radioactive Waste Policy Amendments Act of 1985 (LRWPAA), NRC developed and published guidance on licensing alternative near surface disposal techniques. In December 1986 NRC published a technical position, NUREG-1241, "Licensing of Alternative Methods of Disposal of Low-Level Radioactive Waste." In January 1988, NRC published revisions to the standard format and content guide and standard review plan for alternatives that would be constructed of cement material with earthen covers such as below-ground vaults and earth mounded concrete bunkers. Guidance for licensing other land disposal methods, such as mined cavity disposal, has not been developed and such facilities would be handled on a case by case basis.

10. The four performance or safety objectives established by Part 61 are to: protect the general population from releases of radioactivity, protect individuals from inadvertent intrusion, protect individuals during operations and ensure stability of the site after closure.

11. The siting requirements identify both desirable site characteristics as well as characteristics to avoid, and apply to the broad range of geologic, hydrologic, meteorologic, and climatic conditions that will be reflected in siting locations throughout the country. The site suitability requirements are also intended to function collectively with requirements on facility design, operations, closure, waste form and classification to assure isolation of LLW.

12. Under the LLW classification system established in Part 61, LLW is divided into three categories (Class A, B, or C) based on the radionuclides present in the waste and their radioactivity concentration. Specific concentration limits are established for each waste class.

13. The concentration limits are based on analyses of potential biological hazard and include consideration of factors such as the radiotoxicity, physical half life and biological half life of the radionuclide. Class A waste has the lowest concentration limits, Class C the highest. LLW which exceeds the concentration limits for Class C waste is generally not acceptable for near surface disposal and requires prior evaluation and approval for disposal at a near surface disposal facility.

14. The classification system is progressive in nature. As the waste class, and thus, associated hazard potential of the waste increases, the requirements in Part 61 placed on disposal of that waste class increase. Class A waste must meet minimum waste form requirements and must be disposed of in separate disposal units from those used for disposal of Class B and C waste. Class B and C waste must meet the minimum waste form requirements and additional waste form stability requirements. Class C waste must be disposed of at greater depths or with additional barriers to provide additional protection against inadvertent intrusion.

15. The classification system establishes a limit on the concentration of long-lived radionuclides present in Class C waste and a lower concentration limit for class A and B waste. Long lived radionuclides may be present in all three waste classes, but at concentration limits that are dependent on the waste class.

16. Part 61 allows the concentration of a radionuclide to be averaged over the volume of the waste or weight of the waste including the volume or weight of the solidification media used to encapsulate the waste. It is not acceptable, however, to intentionally combine different waste types of different waste class or to add unlimited volumes or weights of solidification media to intentionally dilute and lower the waste class.

17. Under the Low-Level Radioactive Waste Policy Amendments Act of 1985 (LLRWPAA), States are responsible for providing disposal capacity for Class A, B, and C wastes as defined in Part 61. Wastes exceeding the Class C concentration limits are a responsibility of the Federal Government. Under the LLRWPAA, States also have the prerogative to elect to accept LLW exceeding the Class C concentration limits for disposal.

18. Currently, the majority of LLW falls into the Class A category (approximately 96% of the total volume is Class A waste. Approximately 3% is Class B and 1% Class C.) Class C waste accounts for approximately 54% of the total activity, Class B 36% and Class A 10%. These numbers vary from year to year, and among generators, based on factors like advances in technology.

19. The LLRWPAA establishes a series of milestones, incentives and penalties for the development of new disposal capacity by States. While such disposal capacity is being developed, NRC recognizes that licensees currently have and

will continue to have need to store LLW for an interim period of time either prior to shipment for disposal at existing disposal facilities or while such new disposal capacity is developed.

20. NRC views storage of LLW as a short term interim step between generation of waste and ultimate disposal, not as a substitute for the development of new disposal capacity. In the interests of protecting the public health and safety and maintaining occupational exposures as low as reasonably achievable, the length of time LLW is placed in storage should be minimized. Guidance on storage of LLW at reactors and materials licensees is set out in two Generic Letters for reactors (Generic Letters 81-38 and 85-14) and Information Notice 90-09 for materials licensees. NRC has also issued Information Notice 89-13 to provide information to licensees on actions they should consider in the event they are denied access to the currently operating disposal facilities. Generic Letter 81-38 is attached as Exhibit *P*.

Pursuant to 28 U.S.C. §1746, I declare under penalty of perjury that the foregoing is true and correct.

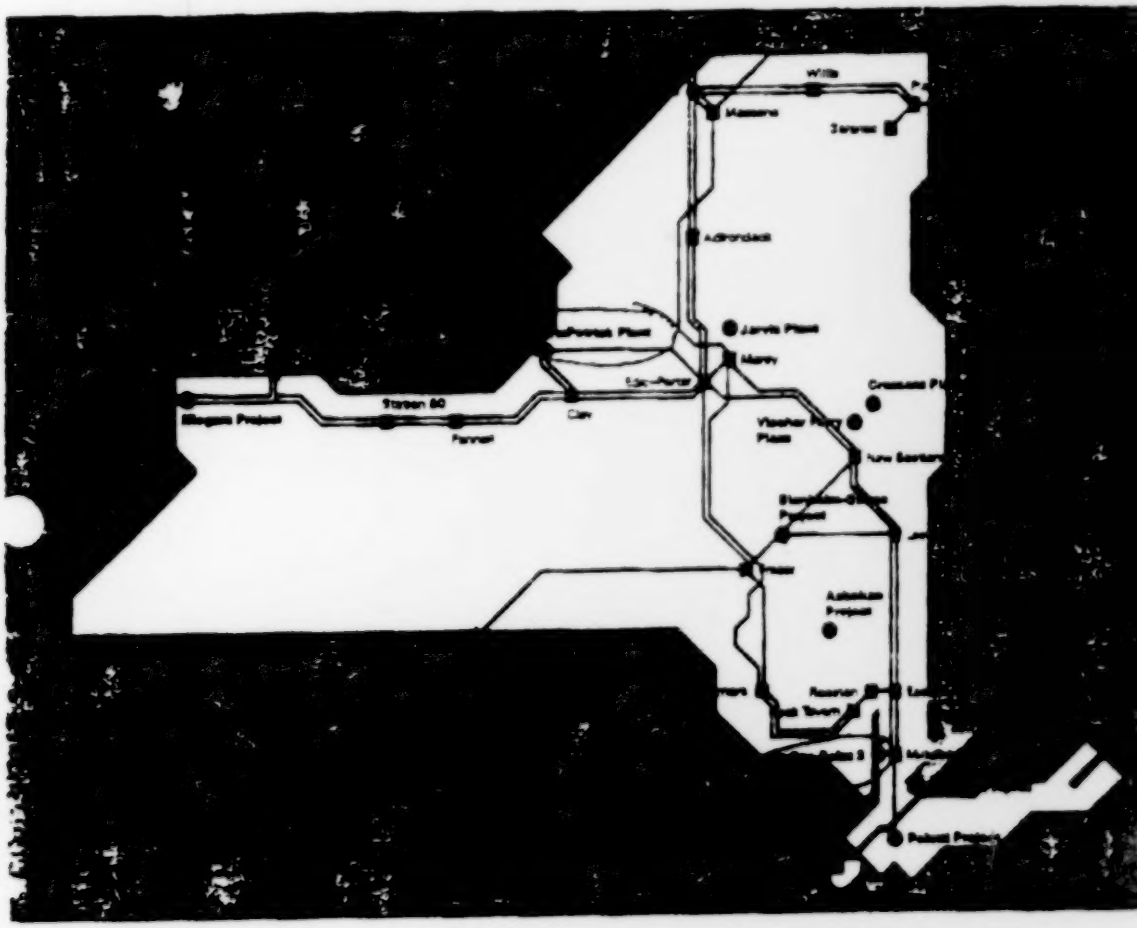
Executed on: October 25, 1990

RICHARD L. BANGART

United States Exhibit E—New York Power Authority Annual Report for 1989 (Exhibit only includes the cover and pages 25-27 of the report.).

Power Authority Network

Source: NY Power Authority Annual Report for 1989



Power Authority Projects
Power Authority Substations
Substations of Others
Power Authority Lines
Lines of Others Available as Needed

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(25) POWER AUTHORITY FACILITIES

St. Lawrence-Franklin D. Roosevelt Power Project

Location: Massena, on the St. Lawrence River

Net Dependable Capability: 800,000 kw

First Commercial Power: July 1958

1989 Net Generation 6.5 billion kwh

Net Generation Through 1989 210.5 billion kwh

Principal Features:
Robert Moses-Robert H. Saunders Power Dam: runs from Barnhart Island in the United States to Cornwall, Ontario. Thirty-two generators-16 on each side of the international boundary. Length, 3,200 feet; height, 167 feet; width, 184 feet. Hydraulic head: 81 feet.

Long Sault Dam: extends 2,960 feet from the New York mainland to Barnart Island.

Iroquois Dam: located 25 miles upstream from Long Sault Dam near Iroquois Point in Canada. Controls outflow from Lake Ontario. Length, 1,980 feet; height, 67 feet; width, 80 feet.

Niagara Power Project

Location: Lewiston, on the Niagara River

Net Dependable Capability: 2,400,00 kw

First Commercial Power: January 1961

1989 Net Generation: 14.2 billion kwh

Net Generation Through 1989: 425.9 billion kwh

Principal Features:
Two water intakes on the Niagara River, located two and a half miles upstream from the Falls.

Two underground conduits, each 46 feet by 66 feet, carry water four and a half miles under the City of Niagara Falls to a forebay connecting the Robert Moses and Lewiston plants.

Robert Moses Niagara Power Plant: 13 turbine-generators. Length, 1,840 feet; height, 389 feet; width, 580 feet. Hydraulic head: 305 feet.

Lewiston Pump-Generating Plant: 12 pump-generators, each rated at 20,000 kw; 1,900-acre storage reservoir.

Blenheim-Gilboar Pumped Storage Power Plant

Location: Blenheim and Gilboa in Schoharie County, about 40 miles southwest of Albany.

Net Dependable Capability: 1,040,000 kw

First Commercial Power: July 1973

1989 Gross Generations: 1.4 billion kwh

Gross Generation Through 1989: 24.7 billion kwh

Principal Features:
Lower reservoir: 420 acres on Schoharie Creek. Upper reservoir: 390 acres on Brown Mountain. Connecting tunnel system: vertical shaft and horizontal tunnel branching into four penstock tunnels. Powerhouse: four reversible pump-generators.

James A. FitzPatrick Nuclear Power Plant

Location: Scriba, on the south shore of Lake Ontario, Oswego County

Net Dependable Capability: 800,000 kw

First Commercial Power: July 1975

1989 Net Generation: 6.2 billion kwh

Net Generation Through 1989: 65.8 billion kwh

Principal Features:

Boiling water reactor weights 503 tons and uses 115 tons of uranium fuel. Reactor operates at a temperature of 545 degrees F. to produce 10.4 million pounds of steam an hour.

Turbine-generator uses steam from the reactor to rotate 1,800 times a minute to generate electricity at 24,000 volts.

Water from Lake Ontario is used to condense steam from the reactor back to water for reuse in the reactor. None of the lake water goes through the reactor. It is returned to the lake through an underwater fountain that limits the lake's surface temperature increase to less than three degrees F. above the existing temperature near the discharge point.

(26) ***Indian Point 3 Nuclear Power Plant***

Location: Buchanan, on the Hudson River, Westchester County

Net Dependable Capability: 965,000 kw

First Commercial Power: August 1976

1989 Net Generation: 5 billion kwh

Net Generation Through 1989: 59.3 billion kwh

Principal Features:
Pressurized water reactor weights 433 tons and holds 111 tons of uranium fuel. Reactor operates at a temperature of 547 degrees F. and pressure of 2,235 pounds a square inch. Steam generators transfer the heat to a separate system.

Turbine-generator uses steam from that system to rotate 1,800 times a minute to produce electricity at 22,000 volts.

Water from the Hudson River is used to condense steam back to water for reuse in the nonnuclear portions of the steam generators. The river water is returned to the Hudson in a manner that limits the river's surface temperature increase to four degrees F. above the existing temperature.

Charles Poletti Power Project

Location: New York City, on the East River

Net Dependable Capability: 825,000 kw

First Commercial Power March 1977

1989 Net Generation: 2.6 billion kwh

Net Generation Through 1989: 30.6 billion kwh

Principal Features:
Balanced-draft boiler, 175 feet high, modified to burn natural gas as well as oil. Boiler produces 6.6 million pounds of steam an hour to rotate the turbine-generator 3,600 times a minute. Oil-storage tank farm with 36-million-gallon capacity.

Ashokan Project

Location: Ashokan Reservoir, in Olive, Ulster County

Net Dependable Capability: 3,300 kw

First Commercial Power November 1982

1989 Net Generation: 20.4 million kwh

Net Generation Through 1989: 147.1 million kwh

Principal Features:
Underground powerhouse with two turbine-generators. A 240-foot-long penstock from the reservoir. Remote operations under jurisdiction of Blenheim-Gilboa project.

Kensico Project

Location: Kensico Reservoir, in Valhalla, Westchester County

Net Dependable Capability: 2,400 kw

First commercial Power: July 1983

1989 Net Generation: 18.7 million kwh

Net Generation Through 1989: 103 million kwh

Principal features:
Three turbine-generators installed below ground in the reservoir's lower effluent chamber. Remote operations under jurisdiction of Poletti project.

(27) NOTES TO FINANCIAL STATEMENTS

Note A—General

The Power Authority of the State of New York is a corporate municipal instrumentality and political subdivision of the State of New York created by the Legislature of the State by Chapter 772 of the Laws of 1931, as last amended by Chapter 469 of the laws of 1989.

Properties and income of the Authority are exempt from taxation. However, the Authority is authorized by Chapter 908 of the Laws of 1972 to enter into agreements to make payments in lieu of taxes with respect to property acquired for any project where such payments are based solely on the value of the real property without regard to any improvement thereon by the Authority and where no bonds to pay any costs of such project were issued prior to January 1, 1972.

Note B—Accounting Policies

(1) Accounts of the Authority are maintained in accordance with the Uniform system of Accounts prescribed by the Federal Energy Regulatory Commission (FERC).

(2) Utility plant is stated at original cost and consists primarily of amounts expended for labor, materials, services and indirect costs to lice se, construct, acquire, complete and place in operation the projects of the Authority. Interest on amounts borrowed to finance construction of the Authority's projects is charged to the respective project prior to completion thereof. Borrowed funds and internally generated funds restricted for a specific construction project are deposited in construction funds. Earnings on such fund investments must remain in the fund and may only be used for construction purposes. Earnings on unexpended borrowed funds are credited to the cost of the related project until completion of the project. Interest earned on internally generated funds is deferred and will ultimately reduce the cost of the related project. During 1989, $16,195,000 of interest income on internally generated construction funds was deferred. In periods prior to 1989, such deferred interest income reduced construction work in progress, but as of December 31, 1989, it is reported as a deferred credit on the Balance Sheet. Utility plant is reduced by revenues received for power produced (net of expenditures incurred in operating the projects) prior to the date of completion. The costs of current repairs are charged to operating expenses and renewals and betterments are capitalized. The

cost of utility plant retired and the cost of removal less salvage (exclusive of nuclear plant decommissioning costs) are charged to accumulated depreciation.

(3) Depreciation is provided on a straight-line basis over the estimated useful lives of the various classes of plant as determined by independent engineers and includes estimated cost of removal, net of estimated salvage value. The depreciation provision for 1989 expressed as a percent of average depreciable electric plant approximated 2.7% on an annual basis.

(4) the amortization of nuclear fuel is provided on a unit of production basis. Amortization rates are determined and periodically revised to amortize the cost of nuclear fuel over its estimated useful life. The costs of disposal of spent nuclear fuel will be met from provisions included in operating expenses (See Note F). In addition, the Authority is providing for the decommissioning of its nuclear plants over their estimated useful lives (See Note G (5)).

5) Deferred revenues represent certain billings, related to the recovery of costs, which have been deferred and will be amortized over the life of the applicable asset.

(6) Costs incurred by the Projects' Study Fund for preliminary investigations of a project are transferred to utility plant upon the specification of a project under the General Purpose Bond Resolution (See Note D). If the study does not result in a project, the costs are charged as an expense to net revenues in the period such determination is made.

(7) Unamortized debt discount and expense are amortized over the lives of the related debt issues on a straight-line basis.

(8) In accordance with the Resolution, upon completion, or the latest estimated date of completion, of each project, whichever is earlier, all revenues received from such project are required to be paid into the Revenue Fund.

(9) Funds required for all bond service payments due under the Resolution are payable on July 1 and January 1 and are made available to the Bond Trustee on the immediately pre-

ceding June 30 and December 31, by which dates such amounts are segregated for that purpose. Accordingly, at December 31, 1989 no liability is reflected in the accompanying financial statements for January 1, 1990 bond service payments of $167,599,000.

(10) Investment of the Authority's funds is administered in accordance with the applicable provisions of the General Purpose Bond Resolution and with the Authority's investment guidelines adopted pursuant to Section 2925 of the Public Authorities Law. These guidelines comply with the New York State Comptroller's investment guidelines for public authorities. The Authority's investments have been restricted to obligations of the U.S. Government, its agencies and instrumentalities, and to agreements for the repurchase of such obligations and to direct and general obligations of any state or political subdivision, provided that such obligations were rated in either of the two highest rating categories by two nationally recognized bond rating agencies. All investments are held by the Authority's designated custodian in the name of the Authority. Securities that are the subject of repurchase agreements must have a market value at least equal to the cost of the investment, and the agreements are limited to a maximum fixed term of five business days. At December 31, 1989 the Authority had investments in repurchase agreements of $48,160,000 and the aggregate cost of all investments in U.S. Government securities approximated market value based upon published bid prices. At December 31, 1989 the Balance Sheet reflects cash in the Restricted Funds, Construction Funds and in Current Assets of $1,361,000. The available bank balances were $12,918,000, of which $549,000 was covered by Federal depository insurance, $6,7000,000 was collateralized and $5,669,000 was uninsured. The uninsured balance

United States Exhibit J—(included in the Compilation of Declarations and Exhibits filed on October 26, 1990)—Low-Level Waste: A Program for Action, Final Report of the National Governor's Association Task Force on Low-Level Radioactive Waste Disposal (November, 1980) (excerpts).

LOW-LEVEL WASTE:
A PROGRAM FOR ACTION

Final Report
of the
National Governors' Association
Task Force on Low-Level Radioactive Waste Disposal

November 1980

Energy and Natural Resources Program
National Governors' Association
444 North Capitol Street, Washington, D.C.

This report was prepared by members of the National Governors' Association Task Force on Low-Level Radioactive Waste Disposal and by the staff of the NGA Energy and Natural Resources Program.

Task Force Chairman: Governor Bruce Babbitt of Arizona.

Other task force members:

Governor Bill Clinton of Arkansas (Chairman, NGA Subcommittee on the Environment);
Governor John V. Evans of Idaho and Governor Richard L. Thornburgh of Pennsylvania (Co-chairmen, NGA Subcommittee on Nuclear Power);

Governor James R. Thompson of Illinois (Chairman, NGA Committee on Transportation, Commerce and Technology);
Governor Robert List of Nevada and Governor Dixy Lee Ray of Washington (Co-chairman, NGA Subcommittee on Transportation of Hazardous Materials); and
Governor Richard W. Riley (Chairman, State Planning Council on Radioactive Waste Management).

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CONTENTS

OVERVIEW

The National Governors' Association has in recent years actively promoted the concept of "cooperative federalism." The objective is to provide a more equitable division between federal and state roles in areas where states have the capacity and desire to assume responsibility. Low-level nuclear waste management is a field where the states and the federal government have shared responsibility since the inception of the Agreement States program in 1959. Though questions have arisen about some aspects of the program, over two decades of experience have demonstrated that states can and do possess the technical and administrative capacity to manage low-level nuclear waste disposal.

Last year's temporary closure of two of the nation's three commercial waste disposal sites dramatically highlighted the need to establish additional disposal facilities immediately. Those closures were precipitated by the consistent failure of waste generators to properly package and transport their waste and the subsequent failure of several state and federal agencies to adequately enforce waste packaging and transportation regulations and impose proper sanctions. The crisis created by the site closures also raised questions about the appropriate state and federal roles in securing additional capacity as soon as practicable. The prospect of a federally-imposed solution is one option. The Task Force, however, after assessing the problems and proposed alternatives, has concluded that a solution developed by the states is preferable and possible. A state solution recognizes that, in the final analysis, although certain federal involvement is required, the siting of a low-level nuclear waste facility involves primarily state and local issues which are best resolved at the governmental level closest to those affected.

Unlike many problems confronting the nation, the issue of low-level waste does not, in the view of the Task Force, present insurmountable technical or political obstacles. We do not underestimate the challenge involved in siting additional low-level waste facilities, but it has been demonstrated that safe, long-term disposal technology does presently exist and that through proper incentives and public education, increased adequate disposal capacity can be developed. The Task Force is encouraged that the findings of other groups studying the problem are in accord with those of the Task Force.

The relative unanimity of opinion among groups such as the NGA Task Force, the State Planning Council and the U.S. Department of Energy's Low-Level Waste Strategy Task Force, indicates that implementation of a regional strategy leading to the creation of regional sites is the major task remaining to resolve the low-level waste problem.

THE ISSUE

In July of 1979, the Governors of Nevada, South Carolina, and Washington, the states hosting the nation's only operating commercial low-level waste disposal sites, became concerned about the threat to public health and welfare posed by improper packaging and unsafe vehicles. They demanded that the Nuclear Regulatory Commission and the Department of Transportation enforce waste packaging and transportation regulations. Despite assurances from these agencies, the State of Washington found further violations of the regulations. Governor Ray closed the Hanford facility on October 4. On October 23, Governor List closed the Beatty, Nevada site after a U.S. Geological Survey team uncovered waste buried outside the existing fence—demonstrating inadequate record-keeping for past operations at the site.

The sites were eventually reopened, following promises of certain corrective actions, but the three Governors of the repository states clearly and forcefully wanted their unwillingness to continue to shoulder the entire national burden for low-level waste. They emphasized the necessity for other states to share in that responsibility. In addition, the citizens of repository states have for years borne the health and monetary costs of defective packaging and faulty vehicles. Moreover, some low-level waste is shipped from New England to Hanford, Washington causing excessive transportation costs and threatening unnecessary exposure to residents along the shipping route. The Governors' pronouncement, coupled with the diminishing physical capacity of those sites, compels immediate action.

Low-level wastes are defined as all radioactive wastes except spent fuel, high-level wastes which result from reprocessing of spent fuel, uranium mill tailings or wastes which contain more than ten nanocuries of transuranic contaminants per gram of material. They are generated by a wide variety of government, commercial, and medical sources. Federal generators of low-level include defense and research facilities.

The preponderence of commercial low-level waste is contaminated paper, plastics, rubble, filters, construction material, tools, and protective clothing from nuclear power plants. The growing use of radioactive materials in such products as luminous watch dials, measurement devices and smoke alarms has added to the volume of industrial waste. Finally, during the past two decades the medical profession and the academic community have increased their use of radioactive materials in research and diagnosis. Nearly 100 million diagnostic applications of radioactive isotopes are performed annually.

Excluding federal government sources, between 75,000 and 100,000 cubic meters of commercial low-level waste are generated each year. Nearly half comes from power plants, with almost a quarter from industry and the final quarter from medical and research institutions. A failure to expand low-level nuclear waste capacity can have serious adverse effects on our national energy program and our national health care system.

Low-level radioactive waste management may rapidly become crisis management if states continue to delay development of new disposal sites and techniques. National inaction regarding the creation of additional disposal capacity and techniques threatens to halt or seriously curtail medical research and diagnostic activities critical to the public health and welfare. Every community in this nation will be affected if it becomes more difficult to reap the benefits of nuclear medicine. The timetable associated with providing additional sites is a critical factor.

Until recently, Barnwell accepted low-level waste without restriction, annually receiving in excess of 75% of the nation's commercial wastes. However, since mid-1978, South Carolina has limited waste receipts at the Barnwell site to 2.4 million cubic feet per year. On October 31, 1979, Governor Riley announced a phased schedule to further reduce that limit to 1.2 million cubic feet within two years. Because it is geologically unacceptable, South Carolina also prohibits the burial of organic chemical wastes which comprise a large fraction of the wastes generated by hospitals, medical schools and universities. South Carolina has also refused to accept any waste from certain generators with poor packaging or shipping records.

Based on projected increases in the volume of low-level waste produced in this country and the restrictions on acceptance by current repository states, DOE estimates that a total of at least six low-level waste disposal sites could be required by the year 1990 in accordance with the following schedule:

1980	Barnwell, Beatty and Hanford can handle the nation's low-level waste
1982*	Hanford could be closed as a national disposal site and a new site in addition to Barnwell and Beatty is required
1984	Beatty is filled to capacity and a second new site is required
1986	Only Barnwell remains open, three new sites are required
1988	Barnwell is still open, but the national generation rate requires four additional sites
1990**	Barnwell *and five additional sites are required*

There are several other compelling facts:

—Projections from past trends indicate that the nation will generate 321,000 cubic meters of low-level waste by

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*Policy issues, not physical limitations, are the more immediate factors controlling the future of the Hanford site. Governor Ray has threatened a 1982 closure of the Hanford site as a national repository (except for medical wastes) unless some meaningful progress occurs toward region formation. The mood of the state on this issue is further evidenced by a recent unsuccessful effort by the Washington State Legislature to codify Governor Ray's position, and a subsequent state initiative drive to accomplish the same. However, the actual physical capacity of the present Hanford site is not projected to be exhausted until approximately 1990, with the potential for future site expansion.

**In the absence of *any* restrictions or other complicating factors relating to these three sites, it is possible, but not probable, that all three sites could remain open until 1990. However, it is already questionable as to whether the Beatty site can expand on surrounding federal lands, and Barnwell has already adopted a phased volume-reduction schedule.

1990 as compared to approximately 99,000 cubic meters in 1980.

—DOE estimates that, with a total of six low-level waste disposal sites which may be required by the year 1990, by dividing the nation into five regions, no region would require more than 1-1/3 sites comparable to Barnwell's capacity.

—The U.S. Department of Energy estimates that without additional sites we could experience severe disposal problems by mid-1983.

—The Nuclear Regulatory Commission estimates that, even beginning immediately, complete development of a new site would take from two to four years.

In summary, the severity of the problem requires that additional waste disposal capacity be developed as soon as possible. To accomplish that, the Task Force urges the National Governors' Association to adopt the recommendations outlined below.

RECOMMENDATIONS

Regionalization

The most fundamental fact is that we do not need 50 separate state sites. Instead, there is a need for up to six to eight well-regulated and economically viable regional sites. The difficult problem is how to rapidly develop a *process* to first define the most appropriate multi-state regions.

Unlike high level waste, which is primarily a federal responsibility, the disposition of low-level waste should be largely a state responsibility. In that respect, a regional solu-

tion, where disposal sites would be determined by groups of states negotiating cooperatively, is the Task Force's preferred approach. Regionalization, as prescribed by states, is mandated by such considerations as costs, risk in transport, regional balance and geologic or hydrologic circumstances which may render some states unsuitable for such sites.

Recommendation 1:

> EACH STATE SHOULD ACCEPT PRIMARY RESPONSIBILITY FOR THE SAFE DISPOSAL OF LOW-LEVEL RADIOACTIVE WASTE GENERATED WITHIN ITS BORDERS, EXCEPT FOR WASTE GENERATED AT FEDERAL GOVERNMENT FACILITIES. WHILE EACH STATE IS FREE TO ESTABLISH ITS OWN SITE, THE STATES SHOULD PURSUE A REGIONAL APPROACH TO THE LOW-LEVEL WASTE DISPOSAL PROBLEM.

Since low-level waste is generated in every state, it is unfair to expect three states to shoulder the sole responsibility for the safe disposal of the entire nation's waste. Unlike high level waste, the problem is not so technologically complex that it requires the leadership of the federal government to manage it effectively. Because the states are primarily charged with protecting their citizens' health, safety, and environment, it is appropriate that they assume this responsibility. In addition, the public is more likely to accept siting and other waste management decisions made by state government than by a more remote, less accessible federal agency.

A regional approach is preferred because, with the exception of a few of the biggest waste-generating states, the volume of waste generated in a single state is too small to make a disposal site economical, i.e., to produce revenues sufficient

for its operation and maintenance. In addition, effective waste management requires coordination of regulation throughout the waste cycle—from generation through transportation and processing to ultimate disposal. Despite the best efforts of the disposal site state, improper handling of the waste at any point along the way can defeat the goal of safe disposal.

Regionalization is required by the diminishing capacity of current disposal sites. But even if the existing sites could continue to handle the entire national output of low-level waste, increasing transportation costs would favor establishing disposal facilities nearer to the waste generators and transportation risks are greater the longer the waste must travel.

Recommendation 2:

> IN ORDER TO FACILITATE THE ESTABLISHMENT OF NEW DISPOSAL SITES, CONGRESS SHOULD AUTHORIZE THE STATES TO ENTER INTO INTERSTATE COMPACTS TO ESTABLISH REGIONAL DISPOSAL SITES. SUCH AUTHORIZATION SHOULD INCLUDE THE POWER TO EXCLUDE WASTE GENERATED OUTSIDE THE REGION FROM THE REGIONAL DISPOSAL SITE.

While the states should take primary responsibility for resolving low-level waste issues, they need the help of Congress to remove two obstacles in their path. First, the states should be given advance generic consent to form interstate compacts or other agreements in this subject area. Interstate compacts may be preferable to less formal modes of agreements between states because, as a binding contractual agreement, they provide the continuity of a stable framework which can endure from siting and licensing through decommissioning of a disposal site.

The Compact Clause of the U.S. Constitution requires either advance Congressional consent or subsequent ratification of a compact before it can take effect. By granting advance generic consent, Congress would facilitate the formation of regional low-level waste compacts by the states. Advance consent will also avoid the delay which would result if each individual compact had to be submitted to Congress for ratification following negotiation among the states.

Congress should also empower the states to exclude waste generated outside the region from their regional site. Recent court decisions indicate that, absent Congressional authorization, such a ban may be illegal. Without the authority to ban out-of-region waste many states may find it politically difficult to join a new regional waste compact.

Not only would this exclusivity power make it more attractive to form regional waste compacts in the first place, but as regions adopt such provisions the pressure will increase on those states which have not yet acted. (See Appendix I.)

In addition to compact authorization and exclusivity, the federal government should, at the same time, specify a strict policy for interim storage of low-level waste. Federal legislation should be considered to allow use of DOE sites only for temporary storage of low-level waste, and the storage fee should be commensurate with the disposal fee required by the operating sites. This would avoid the prospect of DOE sites becoming a permanent disposal alternative for those states failing to participate in a regional compact or develop their own site.

Two alternative approaches to Recommendation 2 were addressed by the Task Force with the following results:

Alternative 2A	Congress should require states to form regional compacts for low-level waste without mention of specific sanctions.
Alternative 2B	Congress should require states to form regional compacts and impose sanctions (similar to pending Congressional legislation) for states which fail to form compacts or establish their own sites.

Many of the compact-authorization bills drafted so far have coupled Congressional consent with sanctions for failure by the states to act. For example, the Udall bill (H.R. 6390) and the Lujan bill (H.R. 6212) would cancel NRC licenses in states which have failed to act. A draft bill was submitted by DOE for consideration by the State Planning Council. It would ban interstate low-level waste shipments unless made pursuant to a regional compact. The Task Force feels that such coercive measures are unnecessary at this time.

If the strategy for region-formation suggested below is followed, most of the states can be grouped into waste disposal regions in the near future. If the new regions opt to exclude out-of-region wastes, then pressure will naturally build on the remaining states to devise their own regional or in-state disposal solutions. In this manner, pressure will come from the states themselves rather than from federal coercion. This process is viewed as being more consistent with the principle of state responsibility in this subject area than federal coercion would be.

Therefore, the Task Force would recommend that Congress defer consideration of sanctions to compel the establishment of new disposal sites until at least two years after the enactment of compact consent legislation. States are already confronting the diminishing capacity of present sites and an

unequivocal political warning from those states' Governors. If at the end of the two-year period states have not responded effectively, or if problems still exist, stronger federal action may be necessary. But until that time, Congress should confine its role to removing obstacles and allow the states a reasonable chance to solve the problem themselves.

Region Formation—A Strategy

The first challenge the states face in devising a regional solution is determining the regional boundaries. The location of the three existing disposal sites suggests a good starting point. Waste generation rates and transportation considerations should be taken into account in the formation of regions for new disposal sites. But in the final analysis region-formation is a political question which will be influenced by considerations such as historic and geographic ties among the states and the track record they have established for cooperation in other areas of mutual concern.

In devising a rational and orderly strategy for region formation, the Task Force was guided by the following premises:

1. Region-formation should be accomplished by the states, rather than imposed on them by the federal government.

2. Initiatives by groups of states which are already exploring the potential for regional cooperation should be encouraged. (Such initiatives have developed in the Midwest and the Northeast.)

3. The strategy should minimize the risk that individual states would end up isolated from a surrounding region.

In addition, the Task Force makes the following assumptions:

1. The three disposal sites currently operating will likely become regional sites.

2. The Midwest and the Northeast are the most logical areas for the establishment of the first new regional disposal sites both because they are more remote from the current sites, and they include some of the highest volume-generating states.

The Task Force has noted a general reluctance by some states to devise a regional program which actually specifies what states are within what regions.

The Task Force has attempted to tackle this tough issue with a proposal for an initial course of action along the following recommended guidelines:

Recommendation 3:

A TOTAL OF SIX REGIONAL CONFERENCES SHOULD BE ORGANIZED AS SOON AS POSSIBLE TO DISCUSS THE NEED FOR ADDITIONAL DISPOSAL SITES AND THE OPTIONS FOR REGIONAL FACILITIES. THE GOVERNORS OF STATES WITH OPERATING SITES SHOULD CONVENE A CONFERENCE ON REGION-FORMATION FOR THE STATES IN THEIR GENERAL AREA. ALSO, THE NATIONAL GOVERNORS' ASSOCIATION, IN COOPERATION WITH THE NATIONAL CONFERENCE OF STATE LEGISLATURES AND THE STATE PLANNING COUNCIL, SHOULD CONVENE CONFERENCES ON REGION-FORMATION IN THE REGIONS WHICH DO NOT CONTAIN

OPERATING DISPOSAL SITES. ALTHOUGH PARTICIPATION IN EACH CONFERENCE SHOULD BE OPEN TO ANY STATE, THE FOLLOWING IS A *SUGGESTED* FORMAT:

Southeast Regional Conference
- *South Carolina
- North Carolina
- Georgia
- Florida
- Alabama
- Tennessee

Southwest Regional Conference
- *Nevada
- California
- Arizona
- New Mexico
- Colorado
- Utah

South Central Regional Conference
- Texas
- Louisiana
- Mississippi
- Arkansas
- Missouri

Midwest Regional Conference
- Illinois
- Indiana
- Ohio
- Michigan
- Wisconsin
- Minnesota
- Iowa

Northwest Regional Conference
- *Washington
- Alaska
- Idaho
- Montana
- Oregon
- Wyoming

Northeast Regional Conference
- Maine
- New Hampshire
- Vermont
- Massachusetts
- Rhode Island
- Connecticut
- New York
- New Jersey
- Pennsylvania

*The present repository states.

It should be noted that this format merely represents an initial attempt to suggest some natural groupings of states, based on their geographic proximity or previous cooperative efforts and agreements. For instance, states suggested in the Southwest and Northwest Regional Conferences have some historic ties as members of the Western Interstate Energy Board. Similarly, the states grouped in the South Central and Southeast Regional Conferences are among the states which

comprise the Southern States Energy Board. States listed below, not included in any of the above groups, should participate in their choice of one or more of the six conferences:

Hawaii	Kentucky
North Dakota	Virginia
Nebraska	West Virginia
Kansas	Maryland
Oklahoma	Delaware
District of Columbia	South Dakota

Other Alternatives

The Task Force considered the following alternatives to the above strategy:

Alternative 3A	Allow the states to continue to negotiate regional compacts on an ad hoc basis.
Alternative 3B	Request the federal government (Congress or DOE) to devise regions.
Alternative 3C	Have the states (through the NGA or other state association) convene a national conference on region-formation.

Alternative 3A was rejected because many states have not yet become involved in any discussions leading toward a regional solution to the low-level waste problem. The Task Force placed a high priority on the early involvement of *all* states in this process. In addition, forming regions on an ad hoc basis poses a real danger of leaving some individual states isolated from surrounding closed regions.

Alternative 3B was rejected because it violates the first premise on which the Task Force proceeded. While federal

imposition may become necessary if the states fail to take timely action, it should be the last resort.

Alternative 3C was rejected because it was felt it would be extremely difficult, if not impossible, to achieve consensus among all fifty states on a particular regional scheme.

Other Regionalization Recommendations

Recommendation 4:

> A COMPACT FORMED BY ANY REGIONAL GROUP OF STATES SHOULD CONTAIN A PROVISION FOR SUBSEQUENT ADMISSION OF NEW MEMBER STATES AND A MECHANISM TO ENABLE TEMPORARY OR EMERGENCY CONTRACTUAL ARRANGEMENTS WITH NON-REGION STATES OR INDIVIDUAL GENERATORS.

This would prevent a region's ability to exclude other states from becoming oppressive. Temporary arrangements would give time to states outside of compacts to develop their own compact or in-state site.

Recommendation 5:

> THE U.S. DEPARTMENT OF ENERGY AND ALL OTHER APPROPRIATE FEDERAL AGENCIES SHOULD PROVIDE TECHNICAL ASSISTANCE TO EACH OF THE REGIONAL CONFERENCES. THIS SHOULD INCLUDE INFORMATION ON WASTE GENERATION, SITE CHARACTERISTICS AND TRANSPORTATION CONSIDERATIONS, AND OTHER RELEVANT

INFORMATION, IN ORDER THAT THE CONFERENCE CAN MAKE A PRACTICAL DETERMINATION ON REGION-FORMATION.

THE SITING PROCESS

Once the states have begun to form regions, the next major decision concerns the process which must be followed in order to develop an appropriate site within the region. Similar to the determination of regions, the siting process will be largely a political one. It will inevitably entail a mixture of state legislative and executive actions.

Consequently, it would be difficult and unwise to presuppose a uniform siting process. The details of the siting process and the individual state's commitments to the binding nature of the selection procedures should be negotiated as a provision of the compact.

A crucial issue here is public acceptance and the means by which the host state can maximize public acceptance. To help assure that support, the siting process must be scrupulously equitable for each state, and the public must know that its state will make the final decision. The whole issue of incentives discussed later, should also help to enhance public acceptance.

Accordingly, the Task Force suggests the following recommendations, alternatives, and other compact considerations with respect to the siting process.

Recommendation 6:

NGA RECOGNIZES THE POLITICAL, TECHNICAL AND ECONOMIC VARIABLES INVOLVED IN EACH REGIONAL PROCESS. THEREFORE, IT URGES THAT THE SPECIFICS OF EACH

REGION'S SITING PROCESS BE DETERMINED AS PART OF COMPACT OR AGREEMENT NEGOTIATIONS BY THAT REGIONAL GROUP OF STATES. HOWEVER, TO INSURE THAT THE SITING PROCESS INCLUDES A MAXIMUM AMOUNT OF LOCAL INPUT, EACH STATE WITHIN A REGION SHOULD CREATE ITS OWN STATE REVIEW COMMITTEE TO ACT IN AN ADVISORY ROLE TO ITS OWN EXECUTIVE AND LEGISLATIVE BRANCHES AND TO THE REGIONAL NEGOTIATORS. SUCH COMMITTEES SHOULD INCLUDE STATE, LOCAL AND TRIBAL OFFICIALS AND TECHNICAL EXPERTS APPOINTED BY THE GOVERNOR.

Such State Review Committees should play a central role in conjunction with technical assistance provided by the federal government in developing the blueprint for the siting criteria. These committees will help to offset existing credibility gaps between states and the assisting federal agencies. State Review Committees can provide ongoing cooperation and independent analysis of siting recommendations. State Committees will also begin to involve local, state and tribal officials early in the dicision making stages of the siting process—a critical feature to later obtaining public acceptance in the site state. The specifics of this process are outlined below.

Steps toward compact formation

Typical compact provisions include: statement of purpose or policy, composition of a governing board, voting rights and financing provisions (see Appendix III). The basic steps toward compact formation include:

1. *Region-formation*

The region-formation strategy should yield at least nucleus of states within each of the six general regions. Those states which have reached tentative agreement to explore the possibility of forming a region can then proceed to more detailed negotiations. As they do so, they should try to keep the process open to additional states which may wish to join the region.

2. *Negotiations*

One consideration at this stage is who will negotiate for the state. The governor will in all likelihood appoint the negotiator(s). Since the final product will require legislative approval, a serious effort should be made to involve legislative leaders in the process from the beginning.

3. *Execution*

Once the party states have agreed on all the terms, a written agreement will be executed. Initial agreement could be expressed in one of two ways. The governors of each state could exchange reciprocal executive orders embodying the agreement. Or, if all of the party states belong to either the Western Interstate Energy Board or the Southern State Energy Board, the agreement could be executed as a "Supplemental Agreement" under the terms of the W.I.E.B. or S.S.E.B. compacts. However, either supplemental agreements or executive orders should be viewed as *interim* arrangements only (see Appendix I for more detailed discussion). Ultimately the agreement should be submitted to the legislature of each party state for enactment as a formal interstate compact. Though less formal agreements may serve as a basis for interstate cooperation, pending legislative enactment and the passage of Congressional consent legislation, it is only through legislative enactment by each state that the compact becomes a contrac-

tual obligation, legally binding on all the parties. Also, legislative enactment probably would tend to promote greater public acceptance of the proposal.

Site Selection Mechanics

While the various regions will want to adopt site selection procedures which are tailored to their own needs, the Task Force recommends the approach outlined below as one practical solution, with several alternative approaches also suggested. It is important to note that the policy and political decision-making process recommended below is in no way meant to be in lieu of environmental impact statements or any other environmental requirements.

1. Each state in the region should be encouraged to form a State Review Committee, composed of state, local and tribal officials, and technical experts. The State Review Committee would make an initial characterization of potential sites within the state with federal technical assistance as requested. As mentioned, this process would involve local, state and tribal officials early in the decision-making stages of the siting process—a critical feature to later obtaining public acceptance in a site state. Each State Review Committee would be encouraged to forward two or more site candidates to the Regional Review Committee.

2. The Regional Review Committee would be comprised of the Chairpersons of each State Review Committee in the region. The Regional Review Committee would narrow the number of candidate sites and make a more detailed characterization of each.

3. Final site selection would be made by the governing board of the compact. The Board would select a site from the

list of candidate sites submitted by the Regional Review Committee.

In addition, consideration should be given to formation of a national review board, comprised of members from each region. That board could negotiate from a national perspective—other potential tradeoffs among states or regions. The board could among other things, facilitate agreements whereby regions exchange different forms of low-level waste.

The Task Force considered, but ultimately rejected, the following as possible alternative approaches to the site selection mechanics:

Alternative 6A Allow DOE and USGS to recommend three suitable sites within each region or devise site selection criteria.

Alternative 6B Request NGS (or other state association) to devise a site selection process.

Host State Rights

The Task Force recommends the following approach to the controversial issue of veto action by a state selected as a regional site:

Recommendation 7:

A STATE WHICH IS ULTIMATELY SELECTED AS A REGIONAL SITE CAN EXERCISE A VETO, BUT AS A PENALTY THAT STATE COULD BE REQUIRED TO DROP OUT OF THAT COMPACT

An inevitable question is whether a state chosen to host a regional site should ultimately have veto power. Realistically, states would have a difficult time relinquishing all veto power.

In accordance with the site selection mechanics, a potential site state would have an opportunity to make its case for or against a proposed site to the Regional Review Committee and to the Board. If, despite all the evidence and argument presented by the site state, the Board ultimately selects that site over the site state's objection, the question of veto rights arises. Even if a site state veto is expressly disallowed by the terms of the compact, a *de facto* veto would likely result if the site state simply refuses to cooperate.

Therefore, the Task Force recommends that the site state be given the right to veto the Board's final decision, but the Board should have the authority to impose sanctions, including expulsion from the compact, if a veto is exercised. By expressly allowing a veto, some states' reluctance to enter a regional compact may be minimized. But significant sanctions should discourage unreasonable vetoes. If the vetoing state is denied access to the regional site it will have to either find another region which will accept its waste, or make its own arrangements in-state. The former would be very difficult, and the latter would likely be economically unattractive. In addition, the vetoing state will probably confront the same political problems in developing an in-state site which it encountered in the regional siting process.

In summary, site-selection procedures should be spelled out in all regional compacts. Even if the region contains an operating disposal site (or if one of the states in the region has offered to host a new regional site) the region may need additional disposal sites in the future. Also, the compact may become involved in siting other low-level waste management facilities, such as a waste processing plant. Or the compact

may become involved in siting hazardous waste facilities in one state as an incentive to the acceptance of a low-level waste facility in another state.

INCENTIVES AND BENEFITS

Expeditious development of regional low-level nuclear waste facilities will likely depend on the quality and quantity of incentives and benefits available to state and local units of government. The concept of *incentives* recognizes the need to encourage and motivate the states and local communities to accept location of a low-level nuclear waste disposal facility. For example, the availability of funds to be used at the discretion of site states and site communities, would act as a positive inducement toward locating a site. On the other hand, the concept of *benefits* acknowledges the need to provide some type of rightful compensation or commitment for specific needs of or effects on a state and community as a result of their acceptance of such a regional facility. For instance, such benefits could include financial commitments to the site state and community and substantial Perpetual Care and Decommissioning Funds to be provided by waste generators agreed to as a condition of their licensing.

Successful efforts to encourage public acceptance of a site must provide incentives and benefits to those affected by the presence of a regional site. Accordingly, two distinct parties need to be benefited: (1) the local community hosting the waste facility; and (2) the site state. These two parties should receive some kind of incentive and benefit to be provided by the federal government and the generating states within the region. Various state and federal legislative action should be encouraged to achieve that purpose.

To date, federal legislation has taken a negative approach in attempting to force state action on the disposal issue. The Task

Force prefers the carrot to the stick and believes that sanctions should be a last resort, only instituted if constructive programs fail to accomplish state action.

The degree to which incentives and benefits are utilized to facilitate local acceptance of a site will depend in part on the success of public education programs. Such programs can minimize the overall need for such incentives or benefits by increasing public awareness regarding the actual low risk associated with such sites. This is especially true given the general public's lack of understanding about the nature of low level radioactivity.

Consequently, the most effective methods of achieving public acceptance in locating such a facility are to provide for public participation, public education and some form of financial incentive or benefit to the regional site state and community. State, federal and private interests must jointly share the responsibility for accomplishing these educational and economic purposes. Here the concept of "cooperative federalism," so deeply imbedded in our country's history, will face one of its more rigorous tests.

The Task Force offers the following recommendations on the question of incentives and benefits and encourages reference to Appendix II for a more complete discussion of these issues:

Recommendation 8:

CONGRESS SHOULD CREATE A SPECIAL DISCRETIONARY FUND WHICH WOULD CONFER COMPENSATORY AND FINANCIAL BENEFITS TO SITE STATES AND SITE COMMUNITIES TO ACCOMPLISH AT LEAST THREE MAJOR PURPOSES: (1) TO COMPENSATE FOR SIGNIFICANT

EFFECTS TO THE INFRASTRUCTURE OF THE COMMUNITY HOSTING A LOW-LEVEL NUCLEAR WASTE FACILITY, (2) TO PROVIDE EFFECTIVE INDUCEMENTS TO DEVELOP REGIONAL LOW-LEVEL NUCLEAR FACILITIES, AND (3) TO PROMOTE PUBLIC ACCEPTANCE OF LOW-LEVEL NUCLEAR WASTE DISPOSAL SITES.

ADDITIONAL INCENTIVES COULD INCLUDE CERTAIN REGULATORY AND ENFORCEMENT AGREEMENTS AMONG THE GENERATING STATES AND A SYSTEM OF "BONUS" REVENUES TO THE SITE COMMUNITY, PART OF WHICH COULD INCLUDE STATE TAXES ASSESSED AGAINST GENERATORS OR SOME FORM OF COMPENSATION AGREED UPON AMONG THE GENERATING STATES.

The following is a suggested approach to Recommendation 8:

1. *The Federal Role:* Federal incentives must include funds to states for preliminary technical assistance and site characterization *and* a special fund consisting of discretionary grants awarded to states hosting a new regional site. The use of such grant monies would be left to the site states and site communities to decide, although eligibility for such funds could be tied to a regional agreement to establish a waste tracking system or agreement to establish a regional volume reduction policy. The discretionary grant appropriation would revert to the U.S. Treasury at a date certain as a further incentive to promote a quick state-regional response.

2. *The State Role:* Incentives to the site state and site community should include two basic approaches:

—Generating states in the region should provide some combination of economic, regulatory and enforcement commitments to the site state, and

—The site state should require economic incentives be available to any local community or county where the regional site is located.

Generating states should form strict agreements, as part of the terms of a compact, that they will at least:

—Take enforcement action against waste generators in their state on notice of violations.

—Provide inspections of packaging operations prior to shipment to avoid the unsafe transport of low-level wastes.

—Develop policies on transportation routing and notification of shipment.

As a condition of licensing, the site state could require payment of a "bonus" amount from all generators in the region. That revenue would accrue to the site community for its own selected use. A fair compensation sum would be determined by the local government, industry and the states.

3. *Industry's Role:* It is reasonable to assume that the private sector will assume the capitalization costs for regional sites provided there is enough anticipated waste volume to guarantee a profitable operation. Accordingly, industry must be involved in the early stages of development of regional sites to help determine if the volume generated within the proposed region is sufficient to guarantee future profits and thus induce their front-end investment. Operators of the Barnwell site have estimated capitalization costs for a site to be between $6 and $10 million, from initial licensing to completed construction.

The overall pricing system must insure profitability, but at the same time generators must help to provide part of the additional funding for incentives and benefits to the state and local community hosting the site. Generators of the waste should be obligated to pay the previously mentioned "bonus" dollars to local communities, and they should also be required to contribute to the site state's Perpetual Care and Decommissioning Funds.

Recommendations 9:

> FEDERAL FUNDS MUST BE MADE AVAILABLE FOR SITE CHARACTERIZATION STUDIES, PLANNING GRANTS, AND OTHER TECHNICAL ASSISTANCE FOR STATES TO DEVELOP REGIONAL SITES. SUCH FUNDING SHOULD BE MADE AVAILABLE IN A MANNER TO ENCOURAGE DEVELOPMENT OF REGIONAL SITES.

Part of the federal role must be to offer available resources only to states engaged in preliminary activities required to develop regional sites. At a minimum, the Nuclear Regulatory Commission, the U.S. Environmental Protection Agency, the U.S. Geological Survey, the U.S. Department of Energy and the Department of Transportation must be available for all reasonable technical assistance requested by such states. Critical to establishing productive state-federal relationships throughout the process will be the state's ability to acquire independent capability to assess their waste disposal problems.

Recommendation 10:

> AS A TERM OF THE COMPACT, THE GENERATING STATES SHOULD PROVIDE THE SITE STATE ADEQUATE INCENTIVES. THESE

INCENTIVES, TO BE NEGOTIATED BY THE PARTICIPATING STATES, COULD INCLUDE BINDING COMMITMENTS FOR IMPROVED REGULATORY ENFORCEMENT AND AGREEMENTS AMONG STATES TO EXCHANGE DIFFERENT WASTES OR TO NEGOTIATE SPECIFIC EXCHANGES BASED ON ECONOMIC OR OTHER NEEDS OF STATES WITHIN A REGION.

Specific commitments to site states from generating states could include (see Appendix II for more detailed discussion):

—Negotiating tradeoffs among states, such as one or more states agreeing to develop hazardous waste sites or a low-level waste processing facility in exchange for use of a low-level disposal site in another state. For example, the State Commerce Departments in Oregon and Washington negotiated such an exchange agreement in the mid-1960's. Oregon accepts toxic chemical waste from the State of Washington and sends its low-level waste to the Hanford disposal site.

—Requiring strict enforcement or immediate action against the waste generators upon notification by the site state of violations committed by the shipper of a generating state.

—Providing for vigorous enforcement of strict packaging and transportation regulations.

It should be noted that federal rule making is currently underway to improve transportation safety and licensing procedures regarding low-level waste. The U.S. Department of Transportation has proposed "Radioactive Materials Highway Routing Regulations." The proposed new requirements would provide national uniformity in highway routing, a notification

system to states and a data bank for future emergency response planning. Similarly, the U.S. Nuclear Regulatory Commission has issued a preliminary draft of its regulations (10 C.F.R. Part 61) relating to licensing of low-level waste disposal sites. Although the proposed regulation will not be published for written comment in the *Federal Register* until early 1981, currently NRC is holding regional workshops to receive critiques on the draft.

RESEARCH

Ongoing, vigorous and comprehensive research programs are necessary in the management of low-level radioactive waste to assure that existing and future low-level waste disposal sites can meet all applicable criteria and standards to protect public health and safety using the best available technology. In addition, such programs can serve to enhance confidence in the methods used to manage these wastes.

Although the techniques used in the management of low-level waste have improved since 1962 when the first commercial low-level waste disposal site was licensed, the basic technology has seen little change. Recently, due primarily to the rapidly increasing costs for disposal, the incentives to develop new technologies have increased, especially in the area of waste treatment and volume reduction. This has prompted the commercial sector to increase its research and development efforts in these particular areas.

The Department of Energy is currently conducting research to improve the management of low-level waste. The Nuclear Regulatory Commission and the Environmental Protection Agency both have ongoing research and assessment programs in support of their development of standards for low-level waste management. These federal efforts include all aspects of radioactive waste management, from generation to final disposal.

While these ongoing efforts are acknowledged, it is felt that programs aimed at managing low-level wastes can be better enhanced if priority research attention is given to the areas recommended below.

Recommendation 11:

A SIMPLE CLASSIFICATION SYSTEM FOR LOW-LEVEL WASTE IS URGENTLY NEEDED. THE NUCLEAR REGULATORY COMMISSION MUST DEVELOP A SYSTEM BASED ON THE TOTAL HAZARD WHICH INCLUDES AN UPPER AND LOWER CONCENTRATION LIMIT.

Low-level waste is currently defined in the regulations as all radioactive waste which is not defined as high-level waste. This is a totally inadequate definition because certain low-level waste may be considered to be below a threshold concentration and therefore could be disposed of as ordinary trash with insignificant impact, while other low-level waste may be above a concentration that would make it unacceptable for shallow land burial.

Recommendation 12:

THE NRC MUST ESTABLISH IMPROVED GUIDELINES CONCERNING GENERATION AND TREATMENT METHODS FOR LOW-LEVEL WASTE. A VOLUME REDUCTION POLICY FOR ALL COMMERCIAL GENERATORS OF RADIOACTIVE WASTE MUST BE ESTABLISHED THAT ADDRESSES BOTH ADMINISTRATIVE AND TECHNOLOGICAL METHODS

THAT HAVE BEEN PROVEN AS VIABLE ALTERNATIVES. THIS POLICY SHOULD APPLY TO AGREEMENT STATES AS WELL.

Because of the lack of classification system for low-level waste and the somewhat inadequate regulations concerning generation and treatment, many forms of low-level waste are currently treated and disposed of by methods which are in many cases less than desirable. The NRC policies should include:

1. Continuing research into ways to reduce at the source the total volume of radioactive waste generated through such techniques as substituting non-radioactive substances for radioactive ones and substituting short-lived nuclides for longer-lived ones.

2. Improved methods of segregating and identifying waste at the source, thus eliminating that segment of trash that is currently deemed radioactive by association.

3. Improved methods of volume reduction for certain types of waste such as: (a) controlled incineration for combustible trash and scintillation fluids; or (b) advanced methods of treatment such as calcination for other types of low-level nuclear waste streams.

4. Improving the characteristic of the final low-level waste product by developing better solidification media, improved containers or a combination of both.

Recommendation 13:

A COMPREHENSIVE ENVIRONMENTAL MONITORING PROGRAM IS ESSENTIAL TO DETERMINE HOW EFFECTIVE THE TREATMENT AND DISPOSAL CONSIDERATIONS HAVE BEEN.

Continuing research is necessary to insure that equipment and techniques for environmental monitoring are optimized to detect and isolate possible migration of radioactive material for a low-level waste site both during the operational period and after decommissioning.

OTHER RECOMMENDATIONS

Recommendation 14:

AS A TOP PRIORITY, THE NUCLEAR REGULATORY COMMISSION AND THE DEPARTMENT OF TRANSPORTATION SHOULD DEVELOP A COMPREHENSIVE AND COORDINATE INSPECTION AND ENFORCEMENT PROGRAM TO INSURE STRICT COMPLIANCE WITH PACKAGING AND TRANSPORTATION REGULATIONS.

Since the closure of the two western sites, due mainly to sloppy waste shipments, NRC and DOT have made a more serious effort to improve their policies in these areas. Prior to that, according to a recent report issued by the U.S. General Accounting Office, the agencies gave a low priority to enforcement, relying mainly on the integrity of shippers and carriers to comply with the regulations governing the safety of radioactive materials' transportation. The GAO report concludes that much of their work remains fragmented and in need of improvement. For instance, neither NRC nor the Department has done an independent assessment of the scope of the packaging and transportation problems.

DOT is currently involved in rulemaking on Highway Routing of Radioactive Materials (Docket HM-164) which includes the movement of spent fuel and other forms of radioactive material and waste. In that respect, it should be noted that the issue of "prenotification" is of particular concern to states. NGA should consider encouraging DOT to cooperate

with state, local and tribal governments to design and test a system of prenotification on the highway movement of radioactive materials and wastes, to include the point that existing prenotification systems in states not be preempted.

Recommendation 15:

THE AGREEMENT STATES SHOULD BE ENCOURAGED TO ADOPT CIVIL PENALTY AUTHORITY TO ASSIST IN ENFORCEMENT OF NUCLEAR WASTE REGULATIONS.

The same GAO report concluded that the enforcement program of Agreement States was not comparable to that of NRC's because only two of the 26 states have adopted civil penalty authority. Such authority could serve as an intermediate enforcement tool between a written notice of noncompliance and injunction authority—the two actions now available. This authority might encourage more effective and immediate compliance as opposed to just a written notice to a licensee.

Recommendation 16:

THE NRC SHOULD ESTABLISH NATIONAL STANDARDS FOR A "CRADLE TO GRAVE" MANIFEST SYSTEM—IN A COORDINATED AND MORE STREAMLINED VERSION OF THE HAZARDOUS WASTE PROGRAM UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT—TO TRACK LOW-LEVEL WASTE FROM THE POINT OF GENERATION TO THE POINT OF DISPOSAL. AGREEMENT STATES SHOULD BE ENCOURAGED TO ADOPT A COMPARABLE METHOD TO INCREASE REGULATORY OVERSIGHT ON A NATIONAL BASIS.

It is estimated that anywhere from 15% to 40% of low-level waste is not accounted for.

Recommendation 17:

THE NATIONAL GOVERNORS' ASSOCIATION SHOULD PLAY AN ACTIVE ROLE IN IMPLEMENTING THESE RECOMMENDATIONS AND IN WORKING WITH OTHER ORGANIZATIONS TO ACCOMPLISH THE GOALS AND OBJECTIVES SET FORTH IN THIS REPORT. TOWARD THAT END, THE TASK FORCE ENCOURAGES THE NGA TO ALLOCATE SPECIFIC FUNDING AND STAFF RESOURCES FOR IMPLEMENTATION OF THE RECOMMENDATIONS OF THIS REPORT.

CONCLUSION

Developing additional sites and disposal and source reduction techniques for low-level nuclear waste disposal is a critical national priority which requires the expeditious and cooperative action of all states. Clearly, every community in this nation benefits from the nuclear medicine and industrial uses which generate a large portion of this waste. Consequently, it is unfair to expect only three states to solely share the waste disposal burdens for the entire nation's benefits.

In addition to the question of the equity in sharing that burden, there is general consensus that in the next two decades, if the projected increases in national waste generation are accurate, between six and eight new disposal sites may be required. Failure to meet those needs could stifle the national health care delivery system and have serious effects on a major source of our electricity.

In this report, the Task Force has attempted to first define the pivotal issues related to the national waste disposal problem and then recommend pragmatic and innovative solutions.

The Task Force has concluded that the remaining issues are not technical, but matters of public policy and political decision-making. The consequences of inaction in developing additional sites were dramatically revealed last year with the temporary closure of two of the three national disposal facilities.

Therefore, the Task Force strongly emphasizes the need for prompt action by states to begin that important cooperative effort. The national challenge to safely and economically resolve the problems of low-level waste disposal can be met through the swift and responsible action of every state.

Affidavit of Booth Gardner in Support of Motion to Dismiss Complaint (dated 10/26/90).

STATE OF WASHINGTON)
) ss.
County of Thurston)

Booth Gardner, being duly sworn upon oath, deposes and says:

1. I am the Governor of the State of Washington.

2. The State of Washington has been a sovereign state of the United States since 1889. This affidavit is submitted in support of the annexed motion of the states of Washington, Nevada, and South Carolina for Summary Judgment and Dismissal of the above-captioned lawsuit.

3. In 1979, the state of Washington together with the states of Nevada and South Carolina concluded that the three states in which the commercial low-level radioactive waste disposal facilities operated had born the burden of providing disposal capacity for the entire nation long enough. The national problem of disposal of low-level radioactive waste required a national solution supported by all the states. Accordingly Governor Dixie Lee Ray, my predecessor as Governor of Washington, Governor Richard W. Riley of the state of South Carolina, and Governor Robert List of Nevada announced their determination to eventually close the three disposal facilities then in operation and urged Congress to pass legislation which ultimately became the Low-Level Radioactive Waste Policy Act of 1980, Public Law 96-573 (1980 Act).

4. The principal goal of that legislation was to provide for an equitable sharing of the burden of low-level radioactive waste disposal throughout the nation, thereby relieving Wash-

ington, South Carolina, and Nevada of this entire burden. Under the 1980 Act, Congress gave the responsibility for management of the disposal of low-level radioactive waste to each state within whose borders such waste is generated. The concept of state responsibility for the proper disposition of low-level radioactive waste was not an independent creation by Congress, but was cooperatively recommended and developed by the states through the National Governors Association which represents the governors of all fifty states. Under the 1980 Act, Congress encouraged the states to form regional compacts to develop regional low-level waste disposal facilities. Under the 1980 act, after January 1, 1986 the regional compacts were given the authority to restrict out-of-region waste from being disposed at the regional disposal site.

5. Prior to the 1980 act, the citizens of the state of Washington expressed their concerns over accepting other states low-level radioactive waste by passing overwhelmingly a ballot initiative preventing such waste acceptance. Although this measure was overturned in court, Washington citizens continue to express concerns over the known, potential, and perceived risks associated with nuclear waste disposal.

6. After the 1980 Act, significant progress was achieved in developing regional disposal compacts. As of 1985 over thirty states including Washington, Nevada, and South Carolina entered into seven regional compacts and at least two other states had decided to develop their own interstate disposal facilities. However, progress on achieving Congressional ratification of compacts was slowed by the fact that only the Northwest, Southeast, and Rocky Mountain Compact states would have had disposal capacity available as of January 1, 1986 and the other states would not have had any place to send their waste for disposal.

7. From 1980 to 1985, while new compacts had been formed, new disposal facility siting, design, construction, licensing, and operation were years off. With the January 1, 1986 deadline approaching, a potential disposal crisis existed. Again, the states took the lead in resolving the crisis. In July and August of 1984, Governor Riley of South Carolina and the Washington State Legislature substantially improved the prospects for ratification of compacts by announcing that they would consider accepting low-level waste from outside their compact regions for some period after January 1, 1986, if Congress would ratify their compacts. The states, again under the auspices of the National Governors Association, developed a compromise under which the states of Washington, South Carolina, and Nevada agreed to continue to accept all of the nation's waste for an additional seven years in exchange for incentives and penalties that would better guarantee that new sites would be developed. The state- generated and approved National Governors Association's proposal served as the foundation for Congressional action. In 1985 Congress took the state- developed compromise, unanimously passed the 1985 Amendments Act, and averted the potential low-level radioactive waste disposal crisis.

8. The state of Washington, as does New York, chooses to allow and license the construction and operation of various facilities which produce low-level radioactive waste as an agreement state under the Atomic Energy Act. Washington recognizes that the benefits of these operations accrue to all its citizens despite the burden of providing for waste disposal. Generators of low-level waste, licensed by and located in the state of New York for beneficial purposes, have continued to ship radioactive waste out of New York to one of the open disposal sites in Washington, South Carolina, or Nevada in reliance on the provisions of the Amendments Act.

9. Under the 1985 Amendments Act, significant progress has been made by several states and compacts in developing new low-level radioactive waste disposal capacity. The states of California, Arizona, North Dakota, and South Dakota consolidated from what would have been two Compacts into the Southwest Compact; California is the host-state of this Compact. Illinois is the host-state of the Central Midwest Compact made up of Illinois and Kentucky. Nebraska is the host-state of the Central Compact made up of Nebraska, Kansas, Oklahoma, Arkansas, and Louisiana. Texas is a go-it-alone state proposing to develop its own site without a regional compact. Each of these compacts and states have made progress toward development of operational low-level radioactive waste disposal facilities in compliance with the Amendments Act. California and Nebraska have submitted license applications for disposal facilities. California expects its facility to be operating before the end of 1991. Additionally, pursuant to the process set in motion by the Amendments Act, the Northwest Compact and the Rocky Mountain Compact have recently negotiated a proposed agreement whereby the states of Nevada, Wyoming, New Mexico, and Colorado will have access to the disposal site in Washington after 1992. This agreement furthers the Amendments Act policy to regionalize disposal capacity. The probability that the 1985 Amendments Act process will result in the orderly development of new disposal capacity throughout the nation has been central to my decision to provide continued access to the site located in Washington for the disposal of low-level radioactive waste pursuant to the Amendments Act.

10. If the act is determined to be unconstitutional or otherwise invalid, it is my intention to reevaluate the policy position Washington should take for continued operation of its disposal facility absent an agreement among the states for a national policy for comprehensive low-level radioactive waste management. In my opinion, the question whether states should take

title to waste after the deadline established by the Amendments Act is secondary to the question of whether states will face up to their collective responsibility as sovereigns and states of the union to solve this national crisis based on the compromise developed by the states and unanimously approved by Congress.

(Sworn to by Booth Gardner, October 26, 1990.)

Affidavit of Carroll A. Campbell, Jr. (dated 10/24/90).

STATE OF SOUTH CAROLINA)
)
COLUMBIA, SOUTH CAROLINA)

Carroll A. Campbell, Jr., being duly sworn, says:

1) I am Governor of the State of South Carolina.

2) The State of South Carolina has been a sovereign state since March 26, 1776, and became the eighth state of the United States when it ratified the Federal Constitution in 1788. This affidavit is submitted in support of the annexed motion of the states of Washington, Nevada, and South Carolina for Summary Judgment and Dismissal of the above-captioned lawsuit.

3) In 1979, the State of South Carolina together with the States of Nevada and Washington, concluded that the three states in which commercial low-level radioactive waste disposal facilities operated had borne the burden of providing disposal capacity for the entire nation long enough. The national problem of disposal of low-level radioactive waste required a national solution supported by all the states. Accordingly, Governor Richard W. Riley, my predecessor as Governor of South Carolina, and Governor Robert List of Nevada and Governor Dixie Lee Ray of Washington announced their determination to eventually close the three disposal facilities then in operation and urged Congress to pass legislation which ultimately became the Low-Level Radioactive Waste Policy Act of 1980, Public Law 96-573 (1980 Act).

4) The principal goal of that legislation was to provide for an equitable sharing of the burden of low-level radioactive waste disposal throughout the nation, thereby relieving South

Carolina, Washington, and Nevada of this entire burden. Under the 1980 Act, Congress gave the responsibility for management of the disposal of low-level radioactive waste to each state within whose borders such waste is generated. The concept of state responsibility for the proper disposition of low-level radioactive waste was not an independent creation by Congress, but was cooperatively recommended and developed by the states through the National Governors Association which represents the governors of all fifty states. Under the 1980 Act, Congress encouraged the states to form regional compacts to develop regional low-level waste disposal facilities. Under the 1980 Act, after January 1, 1986 the regional compacts were given the authority to restrict out-of-region waste from being disposed at the regional disposal site.

5) After the 1980 Act, significant progress was achieved in developing regional disposal compacts. As of 1985, over thirty states including South Carolina, Washington, and Nevada entered into seven regional compacts and at least two other states had decided to develop their own interstate disposal facilities. However, progress on achieving Congressional ratification of compacts was slowed by the fact that only the Northwest, Southeast, and Rocky Mountain Compact states would have had disposal capacity available as of January 1, 1986.

6) From 1980 to 1985, while new compacts had been formed, new disposal facility siting, design, construction, licensing, and operation were years off. With the January 1, 1986 deadline approaching, a potential disposal crisis existed. Again, the states took the lead in resolving the crisis. In July and August of 1984, Governor Riley of South Carolina and the Washington State Legislature substantially improved the prospects for ratification of compacts by announcing that they would consider accepting low-level waste from outside their compact regions for some period after January 1, 1986, if

Congress would ratify their compacts. The states, again under the auspices of the National Governors Association, developed a compromise under which the states of South Carolina, Washington, and Nevada agreed to continue to accept all of the nation's waste for an additional seven years in exchange for incentives and penalties that would better guarantee that new sites would be developed. The state-generated and approved National Governors Association's proposal served as the foundation for Congressional action. In 1985, Congress took the state-developed compromise, unanimously passed the 1985 Amendments Act, and averted the potential low-level radioactive waste disposal crisis.

7) The State of South Carolina, as does New York, chooses to allow and license the construction and operation of various facilities which produce low-level radioactive waste as an agreement state under the Atomic Energy Act. South Carolina recognizes that the benefits of these operations accrue to all its citizens despite the burden of providing for waste disposal. Generators of low-level waste, licensed by and located in the state of New York for beneficial purposes, have continued to ship the radioactive waste out of New York to one of the open disposal sites in South Carolina, Washington, or Nevada in reliance on the provisions of the Amendments Act.

8) Under the 1986 Amendments Act, significant progress has been made by several states and compacts in developing new low-level radioactive waste of disposal capacity. The states of California, Arizona, North Dakota, and South Dakota consolidated from what would have been two Compacts into the Southwest Compact; California is the host-state of this Compact. Illinois is the host-state of the Central Midwest Compact made up of Illinois, and Kentucky. Nebraska is the host-state of the Central Compact made up of Nebraska, Kansas, Oklahoma, Arkansas, and Louisiana. Texas is a go-it-alone state proposing to develop its own site without a regional

compact. Each of these compacts and states have made progress toward development of operational low-level radioactive waste disposal facilities in compliance with the Amendments Act. California and Nebraska have submitted license applications for disposal facilities. California expects its facility to be operating before the end of 1991. Additionally, pursuant to the process set in motion by the Amendments Act, the Northwest Compact and the Rocky Mountain Compact have recently negotiated an agreement whereby the states of Nevada, Wyoming, New Mexico, and Colorado will have access to the disposal site in Washington after 1992. This agreement furthers the Amendments Act Policy to regionalize disposal capacity. The probability that the 1985 Amendments Act process will result in the orderly development of new disposal capacity throughout the nation has been central to my decision to provide continued access to the site located in South Carolina for the disposal of low-level radioactive waste pursuant to the Amendments Act.

9) If the Act is determined to be unconstitutional or otherwise invalid, it is my intention to re-evaluate the policy position South Carolina should take toward continued operation of the disposal facility absent an agreement among the states for a national policy for comprehensive low-level radioactive waste management. In my opinion, the question whether states should take title to waste after the deadline established by the Amendments Act is secondary to the question of whether states will face up to their collective responsibility as sovereigns and states of the Union to solve the national crisis based on the compromise developed by the states and unanimously approved by Congress.

(Sworn to be Carroll A. Campbell, Jr., October 24, 1990.)

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Affidavit of Robert J. Miller in Support of Motion to Dismiss Complaint (dated 11/1/90).

STATE OF NEVADA)
) ss:
CARSON CITY)

Robert J. Miller, being first duly sworn, deposes and says:

1. I am Governor of the State of Nevada.

2. The State of Nevada has been a sovereign state of the United States since October 31, 1864. This Affidavit is submitted in support of the annexed Motion of the States of Washington, Nevada and South Carolina for Summary Judgment and Dismissal of the above-captioned lawsuit.

3. In 1979, the State of Nevada, together with the States of South Carolina and Washington, concluded that the three states in which commercial low-level radioactive waste disposal facilities operated had borne the burden of providing disposal capacity for the entire nation long enough. The national problem of disposal of low-level radioactive waste required a national solution supported by all the states. Accordingly, Governor Robert List, my predecessor as Governor of Nevada, Governor Richard Riley of the State of South Carolina, and Governor Dixie Lee Ray of Washington announced their determination to eventually close the three disposal facilities then in operation and urged Congress to pass legislation which ultimately became the Low-Level Radioactive Waste Policy Act of 1980, Public Law 96-573 (1980 Act).

4. The principal goal of that legislation was to provide for an equitable sharing of the burden of low-level radioactive waste disposal throughout the nation, thereby relieving Washington, South Carolina, and Nevada of this entire burden.

Under the 1980 Act, Congress gave the responsibility for management of the disposal of low-level radioactive waste to each state within whose borders such waste is generated. The concept of state responsibility for the proper disposition of low-level radioactive waste was not an independent creation by Congress, but was cooperatively recommended and developed by the states through the National Governors Association which represents the governors of all fifty states. Under the 1980 Act, Congress encouraged the states to form regional compacts to develop regional low-level waste disposal facilities. Under the 1980 Act, after January 1, 1986 the regional compacts were given the authority to restrict out-of-region waste from being disposed at the regional disposal site.

5. After the 1980 Act, significant progress was achieved in developing regional disposal compacts. As of 1985, over thirty states including Washington, Nevada, and South Carolina entered into seven regional compacts and at least two other states had decided to develop their own intrastate disposal facilities. However, progress on achieving Congressional ratification of compacts was slowed by the fact that only the Northwest, Southeast, and Rocky Mountain Compact states would have had disposal capacity available as of January 1, 1986 and the other states would not have had any place to send their waste for disposal.

6. From 1980 to 1985, while new compacts had been formed, new disposal facility siting, design, construction, licensing, and operation were years off. With the January 1, 1986 deadline approaching, a potential disposal crisis existed. Again, the states took the lead in resolving the crisis. In July and August of 1984, Governor Riley of South Carolina and the Washington State Legislature substantially improved the prospects for ratification of compacts by announcing that they would consider accepting low-level waste from outside their compact regions for some period after January 1, 1986, if

Congress would ratify their compacts. The states, again under the auspices of the National Governors Association, developed a compromise under which the States of Washington, South Carolina, and Nevada agreed to continue to accept all of the nation's waste for an additional seven years in exchange for incentives and penalties that would better guarantee that new sites would be developed. The state-generated and approved National Governors Association proposal served as the foundation for Congressional action. In 1985, Congress took the state-developed compromise, unanimously passed the 1985 Amendments Act, and averted the potential low-level radioactive waste disposal crisis.

7. The State of Nevada, as do other states, chooses to allow the construction and operation of various facilities which produce radioactive waste, recognizing that benefits of these operations accrue to the citizens despite the burden of providing for waste disposal. Generators of low-level waste licensed by and located in the State of New York for beneficial purposes have continued to ship radioactive waste out of New York to one of the open disposal sites in Washington, South Carolina, or Nevada in reliance on the provisions of the Amendments Act.

8. Under the 1985 Amendments Act, significant progress has been made by several states and compacts in developing new low-level radioactive waste disposal capacity. The states of California, Arizona, North Dakota, and South Dakota consolidated form what would have been two Compacts into the Southwest Compact; California is the host-state of this Compact. Illinois is the host-state of the Central Midwest Compact made up of Illinois, and Kentucky. Nebraska is the host-state of the Central Compact made up of Nebraska, Kansas, Oklahoma, Arkansas, and Louisiana. Texas is a go-it-alone state proposing to develop its own site without a regional compact. Each of these compacts and states have made progress toward

development of operational low-level radioactive waste disposal facilities in compliance with the Amendments Act. California and Nebraska have submitted license applications for disposal facilities. California expects its facility to be operating before the end of 1991. Additionally, pursuant to the process set in motion by the Amendments Act, the Northwest Compact and the Rocky Mountain Compact have recently negotiated an agreement whereby the States of Nevada, Wyoming, New Mexico, and Colorado will have access to the disposal site in Washington after 1992. This agreement furthers the Amendments Act Policy to regionalize disposal capacity. The probability that the 1985 Amendments Act process will result in the orderly development of new disposal capacity throughout the nation has been central to my decision to provide continued access to the site located in Nevada for the disposal of low-level radioactive waste pursuant to the Amendments Act.

9. If the Act is determined to be unconstitutional or otherwise invalid, it is my intention to re-evaluate the policy position Nevada should take toward continued operation of the disposal facility absent an agreement among the states for a national policy for comprehensive low-level radioactive waste management. In my opinion, the question whether states should take title to waste after the deadline established by the Amendments Act is secondary to the question of whether states will face up to their collective responsibility as sovereigns and states of the Union to solve this national crisis based on the compromise developed by the states and unanimously approved by Congress.

10. Further affiant sayeth not.

(Sworn to by ROBERT J. MILLER.)